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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/782,982

02/20/2004

Rafail Zubok

532/5

7133

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7590

09/06/2006

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EXAMINER

MILLER, CHERYL L

ART UNIT

PAPER NUMBER

3738

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,982

Applicant(s)

ZUBOK ET AL.

Examiner

Cheryl Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 7, 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/10/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 6, 8-10, 12, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Songer et al. (US 7,001,433 B2). See figures 6a-6e and col.9 line 17-col.10 line 25. Songer discloses an artificial intervertebral disc comprising a first baseplate (82) with aperture (88), a second baseplate (84) with aperture (90), a bearing mechanism (76) coupled to the baseplates (82, 84), wherein the baseplates rotate relative the bearing mechanism, and wherein the rotation of the baseplates (82, 84) relative the bearing (76) extends the bearing mechanism through the baseplate aperture (at 78 and 80; see fig.6a; the bearing mechanism is partially extending through the aperture during rotation). Songer discloses the baseplates (82, 84) to be outwardly domed (see surfaces 82a and 84a in fig.6B, 6e, and 6f domed is clearly shown). Songer discloses the bearing surfaces of the baseplates to be semispherical (shown as so in figs).

Claims 1-5, 8-12, and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by de Villiers et al. (US 2005/0021146 A1). De Villiers discloses an artificial intervertebral disc comprising a first baseplate (12) with aperture (26), a second baseplate (14) with aperture (26), a

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bearing mechanism (16+33+34) coupled to the baseplates (12, 14), wherein the baseplates rotate relative the bearing mechanism (P0040), and wherein the rotation of the baseplate relative the bearing extends the bearing mechanism through the baseplate aperture (at 36; see figs. 1-4; the bearing mechanism is partially extending through the aperture during rotation). De Villiers discloses the bearing surfaces of the baseplates and the bearing to be semispherical (P0036, P0040). De Villiers discloses the first and second baseplate apertures (26) to have a tapered edge (seen as angled in the figs), increasing the angle of rotation, wherein the bearing is not in physical contact with the tapered edge (36 does not contact surface). De Villiers discloses a bearing (16) having a spherical contour with a bore (32), a first retaining cap (top edge of sleeve 33 considered a cap) having an axial bore (sleeve 33 has a elongate opening) and passing through the first baseplate aperture (26) into the bearing bore (32), and a second retaining cap (top edge of rod 34 considered a cap) passing through the second baseplate aperture (26) into the axial bore of first retaining cap (33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Villiers et al. (US 2005/0021146 A1) in view of Heggeness et al. (US 5,514,180). De Villiers discloses artificial intervertebral discs substantially as claimed (see above), however does not

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disclose the outer surfaces of the baseplates (12, 14) to be dome shaped. Heggeness teaches in the same field of artificial intervertebral discs, the use of dome shaped outer surfaces (ramp, saddle, irregular, bowl, and hump; all analogous to the “dome” shape claimed) placed on intervertebral replacements in order to better fit the anatomy of the body’s spine (col.7, lines 2-15; col.10, lines 37-48; col.4, lines 16-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Heggeness’s teaching of using contoured outer surfaces (such as domed shaped) on intervertebral replacement discs, with the replacement disc of de Villiers, in order to provide a device that more properly fits the shape of the spine and stresses are more evenly distributed.

Allowable Subject Matter

Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Miller whose telephone number is (571) 272-4755. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Corrine McDermott can be reached on (571) 272-4755. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Cheryl Miller



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